U-Reach

EN

Carry Flash Series

USB Drive/ USB-HDD

UB600 Mini USB Duplicator

User Guide

V 1.0

§ Content Index

§ Disclaimer of Warranties

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§ Before You Start

⌘ Important Notice

- Read the complete operation instruction carefully contributes to better operation.
- Make sure the source device is correct and workable.
- To guarantee data consistency, strongly suggest the capacity of source and targets should be the same.
- It is strongly suggest to use “Copy+Compare” to achieve perfect duplication.

⌘ Safety Precautions

- The warranty will expire if damage is incurred resulting from non-compliance with theses operating instructions.
- Please turn off the power before replacing the socket.
- Never turn off the power while processing the firmware update.
- Use only approved power sources.
- The product is only suitable for operation in dry, dust free, clean environment.
  Do not allow liquids or foreign objects to enter. Failure to do so may severely damage your duplicator.

① Product Introduction

1. Overview

The UB600 USB duplicator is a stand alone, high speed and convenient equipment for easily copy data anytime and quickly check Flash device's quality. The checking capability assists you to find out defective Flash device efficiently, like Capacity Check enables you to find out the real capacity of Flash device; Measure Speed helps you to check each Flash device's read and write speed.

This 5-target Flash duplicator is stand alone, no need of PC or any installation procedure, when the system is turned off, nothing will be left in it, so there is no risk of virus infection. And instant power on and off for quick boot up and shut down the duplicator can save your time greatly. Its lightweight design, friendly interface and easy operation is ideal for personal, office and shops application.

2. Features

- Ultra high transmission speed up from 1.5GB/m. Each flash slot channel is independent from each other.
- Real multi-task processing capability. No matter copy, compare, media check and format are all independently executed. Each flash slot has an independent control processing unit. So, during asynchronous copy, it can use up and down keys to check the status of each flash media status and progress.
- Powerful H3/H5 quality check machine for speed and flash quality check.
- Not a PC system, no risk of virus infection. Instant power on and off.
- Real time information will be shown on the LCD screen.
- Support Synchronous and Asynchronous copy/ compare/ erase/ format/ media check / speed check.
- Ultra high speed bit-for-bit hardware comparison.
- Different copy speed selection is available for different quality level flash media.

3. Package

Carry USB mini Duplicator

User Manual

Power Adapter

Power Cord

4. Applicance

USB drive fully plugged

USB-HDD

5. Definition

Flash/Flash Media/Media

Flash media including SD/microSD memory card, Compact flash card, and USB flash drive.

USB-HDD

USB Drive

Capacity

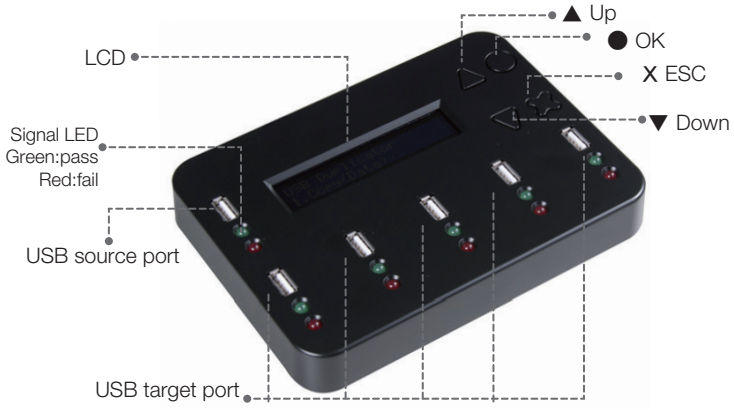
The maximum data amount can be contained in a Flash memory card.

Port

A mechanical construction used to connect two applications

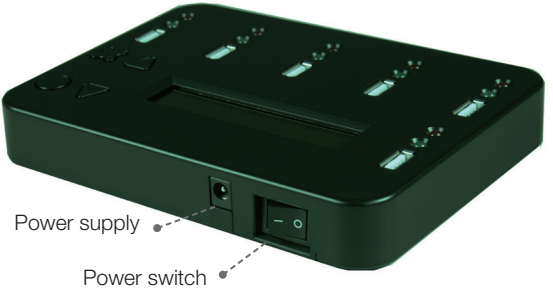
② Basic Instruction

1. Front View

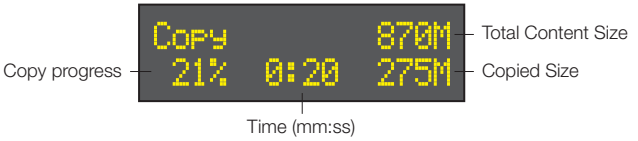


2. Back View

Power Switch and Plug of the Power Supply



3. LCD Configuration



4. Operation Guide

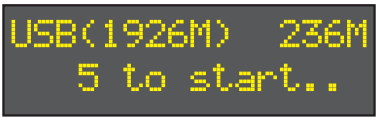
Steps to Copy

Step 1-Plug-in the flash source.

Step 2-Plug-in the flash targets.

Step 3

The LCD will show the number of flash targets which are ready to copy.



Step 4

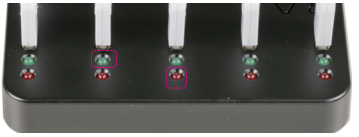
Press <OK> button to start copy.

Step 5

When copy is finished, the LCD will show the result, quantity of copy passed and copy failed.

Note

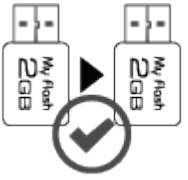
❶ *When copy is processing, the green LED will flash. When the copy has finished, the green LED will stop flashing but will remain illuminated. If an error occurs, the red LED will illuminate.*



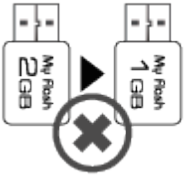
Green Light Red Light

❷ *DO NOT take out the card during copying process.*

❸ *It is strongly recommended that the target and source have to be in close range of capacity. When there is a big difference between target and source's capacity, such as copying 1GB source to a 4GB or 1GB source to a 2GB, it may cause error or copy fail.*



❹ *If copy NTFS or Linux format, targets' capacity must be bigger or equal to source's capacity. For example, when making NTFS or Linux copy, if the source is 2GB and the target is 1 GB, it'll have a very big possibility to cause copy fail.*



NTFS/Linux format copy

③ Function Table

Function	Description	
1. Copy	USB/SD/microSD/CF flash copy.	
2. Compare	This option makes bit-for-bit comparison between the source and all other copied flash cards.	
3. Copy+Compare	This option will make a copy first and then compare the copied Flash media with the source immediately after the copy has finished.	
4. Capacity Check	Checks the Flash real capacity.	
5. Information	5.1 USB Info This feature will show flash's information; file format, content size, and capacity.	
	5.2 System Info This feature will show information of the duplicator system, including controller model number and software version.	
6. Utility	6.1 Do Format	6.1.1 Auto Format To Execute flash FAT 16/32 format
		6.1.2 FAT Format Format media to be FAT16.
		6.1.3 FAT32 Format Format media to be FAT32.
	6.2 Measure Speed This function can measure the flash read and support speed. This function might damage the format and content.	
	6.3 Media check	6.3.1 H3 Safe 100% To check the quality of flash by reading it. This safe check will not delete flash content and format.
		6.3.2 H5 RW 100% To check quality by "0" and "1" reading/writing the flash. Normal check will delete content and format.
		6.3.3 Setup Range To setup the check area from 1% to 100%
		6.3.4 Setup Error Limit Set the % of error tolerance when checking the Flash.
	6.4 Quick Erase To erase flash media flash content. It will keep the FAT format.	
	6.5 Full Erase To completely erase data of flash including format and content, but it needs more time.	
	6.6 DoD Erase Erase Flash three times complying with USA Department of Defense (DoD) standard.	
	6.7 System Update System firmware update via the Flash media. i.e. USB/SD/CF/MSD.	
	6.8 Calc. CheckSum Calculate the CheckSum number of the Flash media in source port.	

7. Setup	7.1 Start-up Menu To select which function is shown first when the system is turned on.	
	7.2 Copy Area	7.2.1 System and Files The system can automatically detect the format FAT16, 32/ NTFS/ Linux (ext2, ext3, ext4) and only copy the data area.
		7.2.2 Whole Media The system will copy the whole content of flash including the empty space, if the data is not format FAT16, 32/ NTFS/ Linux (ext2, ext3, ext4) .
	7.3 Button Beep Choose whether to hear a beep or not when a button is pressed.	
	7.4 Asyn Hold Time (Asynchronous) To set how long the system should wait to ask if to continue or exit the function of Asynchronous copy job.	
	7.5 Target Tolerance To set the tolerance % of capacity gap between the source and target. The default setting is "No limit".	
	7.6 Asynchronous "Enable" to open Asynchronous function, "Disable" to close the function.	
	7.7 Check Before Copy Set if you would like to check the Flash media before copy.	
	7.8 Power Off Time Between Copy&Compare Set the time gap of power supply between Copy and Compare when executing "Copy+Compare" function.	
	7.9 Language Set system language interface i.e. English, Japanese.	
	7.10 Working Mode "Fastest", "Faster", "Normal", "Slower", and "Slowest" to select the speed of data transmission.	
	7.11 Set HDD Mode Set if you would like to copy USB HDD or USB devices only.	
	7.12 Restore Default Back to original manufacturer setting.	

④ Function Introduction

1. Copy

There are two kinds of copy modes, which are Asynchronous Copy and Synchronous Copy. The system will check the content size of the source before executing "copy" function. If the source content size is less than system's buffer memory, it will automatically start asynchronous copying. If the source content size is larger than the system's buffer memory, it will copy with synchronous mode.

1.1 Synchronous Copy

a) How to set "Synchronous Copy"?

1. Go to function "7.6 Asynchronous" to select "Disable".
2. If the source's content size is larger than system's buffer memory, it will execute Synchronous Copy no matter which copy mode you set at function 7.6.

b) Operating Process

1. Plug in the source and target flash media. Select copy function and then press "OK" button .

Capacity of source

The number of target flash plugged in and ready to copy

2. When all flash cards are plugged in, press "OK" button to start copy. Or when all slots are plugged, the system will automatically start copy.

Content size

Progressed size

Progressed time and percentage

3 When finishing copying, the LCD will show the total time of copy, quantity of pass and quantity of copy fail.

Copy area setting

Copy Area ➡7.2 Copy Area.

Select System and File or Whole Media.

Copy mode setting

Copy mode ➡ 7.5 Asynchronous.

Select Enable or Disable asynchronous.

> ***Note***
>
> *When there is an error (Red LED on), you can also press ▲▼ key to check each Flash media's status. For example:*

2. Compare

Compare function is to check the correctness of copying result. The operation is the same as copy.

3. Copy + Compare

This function provides a more convenient selection. Instead of going to function "2. Compare" and pressing "OK" button again after copying, function "3. Copy+Compare" will automatically run the compare function after finishing copying to make sure if the copied result is correct.

4. Capacity Check

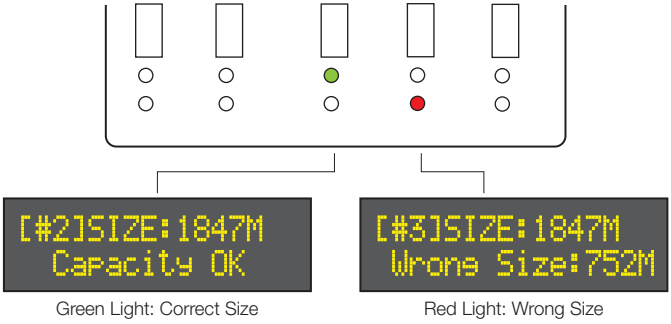
This function can check the real capacity of Flash media.

1. Plug the Flash media into slot and select function "4.Capacity Check", then press "OK" button. About 2~3 seconds, the system will find out its exact capacity.

2. System will show the checking result by Green/Red LED light.

3. You can use ▲▼ button to check the status of each slot.

4. This function supports asynchronous operation. You can continuously plug in and pull out the flash media without pushing any buttons.



Green Light: Correct Size

Red Light: Wrong Size

Note

1. *The function may change the data and format of the flash media.*
2. *To protect the source data, the system will not do Capacity Check on the master device.*
3. *When the Red light illuminates (Error), you can use ▲▼ to check the error information.*

5. Information

5.1 USB Info.

This function will show Flash media's basic information such as media type, content size, and total capacity.

Press ▲▼ buttons to check the information of each flash media including the source.

> ***Note***
>
> *Executing this function will not delete the content or format of flash media.*

5.2 System Information

This function will show information of the duplicator system, including model number and software version.

6. Utility

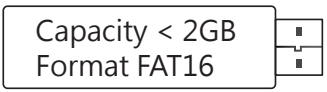
6.1 Do Format

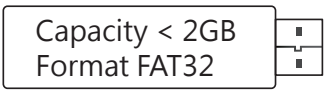
6.1.1 Auto Format

This function is to do flash FAT formatting. Plug the Flash media in the slot and press "OK" button, the system will automatically detect its capacity and formate the media according to it.

- If Flash media format is already FAT16 or FAT32, the format function won't change its original format.

- If Flash media format is not FAT format, i.e. NTFS, Linux or FAT multi-partition. The system will execute format according to flash's capacity. When it is capacity is above 2GB, the system will format the Flash to FAT32, if its capacity is below 2GB, the system will format the media to be FAT16.
  During format process, you can use ▲▼ to check each Flash Card's formatting status, progress and information.





> **Note**
>
> *The source port (port#1) will not execute any formatting, because this function will delete the data of the flash media.*

6.1.2 FAT Format

Format any flash media to be FAT16.

6.1.3 FAT32 Format

Format any flash media to be FAT32.

6.2 Measure Speed

This function can measure the "read" and "write" speed of Flash media.

1. Plug the Flash media into slot and select function "6.2 Measure Speed", then press "OK" button to start.

2. Use ▲▼ buttons to see Flash media exact "Read" and "Write" speed from each port.

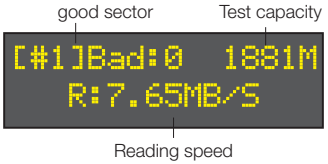
> **Note**
>
> - *This function may change the content of data and format of flash.*
> - *To protect source data, the system will not do "Measure Speed" on the master device.*

6.3 Media Check

This function is to analyze flash's quality. There are two kinds of methods to do media checks, "H3 Safe" and "H5 R/W". Before executing quality check, user can go to function "6.3.3 Setup Range" "6.3.4 Set Error Limit" to finish setting.

6.3.1 H3 Safe 100%

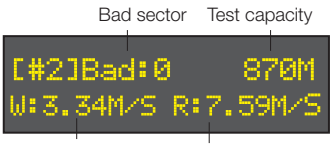
This function is to check the flash's quality by reading the flash media. After executing the function, it will show the volume of bad sectors and also the reading speed of the flash device.

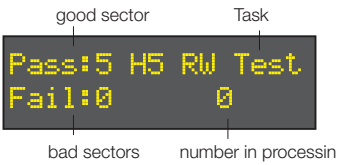


> ***Note***
>
> *This function will not delete the content or format.*

6.3.2 H5 R/W 100%

This function is to check the flash's quality by reading and writing the flash media. After executing the function, it will show the volume of bad sectors and also the reading/ writing speed of the flash device.

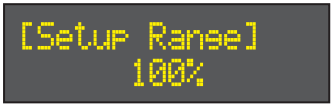




> ***Note***
>
> ❶ *This function will delete the content and format of flash media, please do not execute this function if there is important data in it.*
>
> ❷ *To protect the source data, the system will not execute this function on the master device.*

6.3.3 Setup Range

The function is to set the % of the flash which you would like to check for its quality. Using ▲▼ button to setup the flash examine area from 1% to 100%. 100% means to check the whole Flash, it will take more time.



6.3.4 Setup Error Limit

This function is to set tolerance degree of error, by setting sector/KB/MB/GB, when checking the flash. Using ▲▼ button to setup the error limit value.

Using ▲▼ button to set the parameter

6.4 Quick Erase

This function will erase flash's data content, it will not erase flash FAT16/32 format. It can use ▲▼ button to check each Flash Card's erasing status, progress and information.

> ***Note***
>
> ❶ *Quick erase function can only erase the flash which is FAT 16/32 format.*
>
> ❷ *This function will damage the data in flash, please make sure you have backup all important data before using this function.*

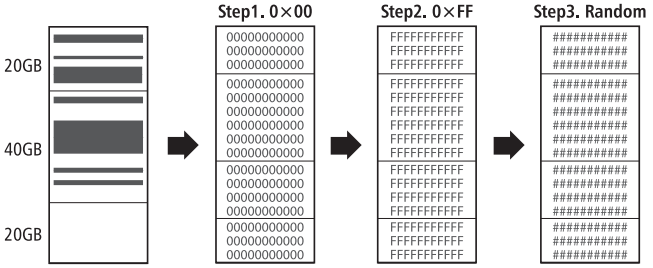
6.5 Full Erase

It will completely erase the whole flash card, including format and content. Therefore full erase will take more time. During the process, you can use "ESC" button to escape the erase process, but the original format and content can't be read any more.

> ***Note***
>
> *This function will damage the data in flash, please make sure you have backup all important data before using this function.*

6.6 DoD Erase

This is to comply with the U.S.A. Department of Defense (DoD 5220) standard to fully erase the Flash three times bit by bit to guarantee the data was deleted.



> ***Note***
>
> *This function will damage the data in flash, please make sure you have backup all important data before using this function.*

6.7 System Update

This is to update the system's firmware version. Please save an un-zipped update file to your Flash media (please don't put it in a folder). Select function 6.7 System update, and press "OK" button, it will automatically start system updating. When finished, please turn off the system for 5 seconds and then turn on again. The new version of firmware will have been uploaded.

- Select function 6.7 System Update, and press "OK", it will automatically start system updating.
- When finished, please turn off the system for 5 seconds.
- Turn on the system, and the new version of firmware will finish uploading process.

6.8 Calc. CheckSum

This function will calculate the CheckSum number of the Flash device plugged in the source port. The CheckSum calculate area will based on the "copy area" you set. If you set "Data only", CheckSum will calculate data area only; if you set "Whole media", the CheckSum number will be calculated based on the whole flash devise size. Be aware that even two flash devices have the same data, if the capacity has any difference, their CheckSum value will be different.

- Enter Function "6.Utility", and then choose Function "6.8 Calc. Checksum".
- Press the "OK" button and this function will start executing.

- After finishing calculating, there will be an 8-digit value produced.

7. System Setup Function

7.1 Start-up Menu

You can select which function is shown first when the duplicator is turned on.

7.2 Copy Area

7.2.1. System and Files

This is also called "quick copy" mode. The system will automatically analyze the source flash card's file format. If the data's file format is FAT16/32, NTFS, Linux (ext2, ext3, ext4) which is recognizable by the system, it will be able to copy data only instead of the whole flash. Otherwise, if the file format is non-recognizable, the system will copy the whole flash card including the empty space. For example, a 2GB flash card which is FAT32 file format and has only 50 MB data inside, the system will only copy that specific 50 MB of data, it takes only a few seconds to copy the source.

> ***Note***
>
> *If the source format is NTFS or Linux, to make sure the target could be operated normally, the target capacity must be equal or bigger than the source device.*

7.2.2. Whole Media

Setup the duplicator in Whole Media function, the system will copy the whole flash card, including the empty space and format. This function is used when you have a flash source which has an unknown file format. For example, a 2GB flash card which is FAT32 file format and has only 50 MB of data inside, if you setup "Whole Media", the system will copy whole 2GB of Flash. It will take longer time to copy the source.

> ***Note***
>
> *When doing whole media copy, the duplicator will not care the capacity difference between source and targets. Hence, you should be careful about the data in the target devices after copying.*

7.3 Button Beep

Choose whether to hear a beep or not when a button is pressed.

7.4 Asyn Hold time

This is to set the time to exit asynchronous copying when you've temporarily finished copying and you've pulled out all the devices, but you haven't exited the copying job. This is to prevent you from mistakenly overwriting a source device when you'd like to start a new source copy but you forgot to stop the previous asynchronous copying job. The default setting is 30 seconds. When the system detects that all the flash cards have been pulled and no new cards have been plugged in after 30 seconds the LCD will display:

Press to exit this Asynchronous or press to keep this status.

Select waiting time 5/10/20/30/40/50 sec, 1/2/5/10/20 min. Or select “Turn Off” to close the function.

7.5 Target Tolerance

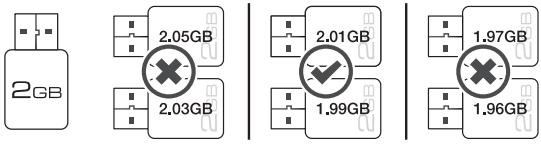
To set the tolerance % of capacity gap between the source and target. There are three models of settings as below, and the default setting is "No limit".

- Allow Tolerance: Under this model, users can set the up and low tolerance % of capacity gap separately between the source and target. And the duplicator will views the setting as capacity limit of target flash media, and filters out the target with incorrect capacity.

  For example : If the flash media is marked as 1G with real capacity of 1000MB inside, when user allows the up and low tolerance to be 1 %, then the workable capacity of target flash media will be :

99%X2GB~101%X2GB) ➡ 1.98GB~2.02GB

Source Target tolerance setting:±1%



Real capacity 2GB 2.02GB (2GB+1%) 1.93GB (2GB-1%)

- No limit: there is no any limit on capacity between the source and target. Please be noted that, under this model, if the data size in the source is over the capacity of target, it might lead to incomplete copy.
- 100% Same: The capacity of targets has to be exactly the same as the source, or it will not able to execute any function.

7.6 Asynchronous

You can select "Disable" to close Asynchronous copy or "Enable" to open the function. If the setup is "Enable", and the data in source is smaller than system buffer memory, it will automatically use asynchronous mode to do copy. If the setting is "Disable", no matter what the content size is or copy method, the system will keep synchronous copy.

7.7 Check Before Copy

You can select if you would like to check the media before copy.

7.8 Power Off Time Between Copy&Compare

To prevent from any data loss problem of unstable flash, we strongly recommend you to follow function 7.8 to set the time gap of power supply between copy and compare. The setting range is from 0 to 15 seconds, and the default setting is 3 seconds.

7.9 Language

Set system language interface.

7.10 Working Mode

The working mode has 5 options to select the transmission speed :

- Slowest Mode
- Slower Mode
- Normal Mode (Default setting)
- Faster Mode
- Fastest Mode

Please make sure your Flash media has good quality and support faster mode. If you are not confident on the flash quality or you find a high failure rate on copy or compare. It is recommended to slow down the working mode. The factory default setting is "Normal Mode".

7.11 Set HDD Mode

This is the setting when users want to copy USB-HDDs. To copy a USB-HDD, users could select "Active Mode" first and then start executing other operation. Or, if users just want to copy USB devices but not USB-HDD, just select "Inactive mode".

> ***Note***
>
> *The reason to make this setting before copying USB-HDD is not only because USB-HDD requires more power but also because it has different file format with USB flash stick.*

7.12 Restore Default

Return back to original factory default settings.

⑤ FAQ

Q1: Can I use UB600 to copy other Flash devices such as micro SD?

A1: Some users may use a USB card reader to copy other different types of Flash device, such as SD, CF, and Memory Stick etc. Due to the quality and stability of USB card reader in market are different, a poor-quality card reader may damage the system and the quality of copy. Therefore, it is recommended to copy SD/ Micro SD/CF by using qualified USB card reader.

Example :

The card reader supports the major kinds of Flash: SD, Micro SD and CF.

Q2: Can I copy USB devices with big different capacity ? (For example 4GB to 1GB)

A2: Yes, UB600 will copy whatever the capacity size is. However, to avoid an unexpected poor quality of data duplication, it is strongly recommended that target and source have to be in close range of capacity.

⑥ Specification

Model	UB600
Target	1:5 (6-port)
Operation	Stand-alone operation
Support media	USB1.1 / USB2.0 / USB3.0 USB drive / USB-HDD
Support media via adapter	SD / SDHC / Micro SD / MMC / Mini SD / CF (by USB multimedia card reader)
Copy mode	Data Area only, Whole media
Check function	Device Info., Capacity Check, Measure Speed, Professional Inspection H3/H5
Capacity	Up to 3TB (USB drive) Up to 4TB (USB-HDD)
Buffer	256MB
Language	English, Japanese
Display	2x16 Monochrome LCD display
Control button	4 push buttons (▼"Down" , ▲"Up", ●"OK", X "ESC")
LED	LED (Green/Red) on each slot
Power supply	12V 5A Adapter
Temperature range	Working temperature: 5°C~45°C
	Storage temperature: -20°C~85°C
Humidity range	Working humidity: 20%~80%
	Storage humidity: 5%~95%
Safety & Certification	CE, FCC, RoHS

* *It is strongly recommended to use same capacity Flash devices for duplication.*

* *The above information is for marketing reference only. The actual specification may subject to change without notice.*

UReach

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